

DEER HERD UNIT MANAGEMENT PLAN
Deer Herd Unit #29
(Zion)
April 2006

BOUNDARY DESCRIPTION

Iron, Kane and Washington Counties - Boundary begins at I-15 and the Utah-Arizona state line; north on I-15 to SR-14; east on SR-14 to US-89; south on US-89 to US-89A; south on US-89A to the Utah-Arizona state line; west on the Utah-Arizona state line to I-15.

LAND OWNERSHIP

RANGE AREA AND APPROXIMATE OWNERSHIP

	Year-long range		Summer Range		Winter Range	
Ownership	Area (acres)	%	Area (acres)	%	Area (acres)	%
Forest Service	0	0%	60638	20%	1270	<1%
Bureau of Land Management	1270	8%	19123	6%	268291	58%
Utah State Institutional Trust Lands	52	<1%	9059	3%	37693	8%
Native American Trust Lands	0	0%	0	0%	2226	<1%
Private	14149	91%	177242	59%	87560	19%
Department of Defense	0	0%	0	0%	0	0%
USFWS Refuge	0	0%	0	0%	0	0%
National Parks	0	0%	35501	12%	67854	15%
Utah State Parks	0	0%	0	0%	0	0%
Utah Division of Wildlife Resources	0	0%	0	0%	0	0%
TOTAL	15471	100%	301563	100%	464894	100%

UNIT MANAGEMENT GOALS

Maintain a healthy deer population with post-season numbers that are in balance with available winter range. A major proportion of this herd unit is on private land and herd size must be compatible with private land uses, particularly in such areas as Smith's Mesa, which has some dry land farming but also is important seasonal range for deer.

Cooperate with the public and land management agencies in managing deer to provide a diversity of deer hunting and viewing experiences.

POPULATION MANAGEMENT OBJECTIVES

- < Target winter herd size - A modeled winter population of 9,000 deer on the entire WMU. This population objective remains for both the short-term (5-year life of this plan) and long term, barring significant changes in range conditions.
- <
- < Herd Composition – Maintain a region wide three-year average post-season buck:doe ratio ranging from 15 to 20 bucks per 100 does.

	Objective from past plan (2001)	Long-term Objective	2006-2011 Objective	Change
Zion	9,000	9,000	9,000	0

POPULATION MANAGEMENT STRATEGIES

Monitoring

- < Population Size - Herd composition and population size will be monitored through post season and spring classification, hunter checking stations, harvest surveys and computer modeling.
- < Buck Age Structure - The age class structure of the buck population will be monitored through the use of checking stations, postseason classification, uniform harvest surveys and field bag checks.
- < Harvest - The primary means of monitoring harvest will be through the statewide uniform harvest survey. The target population size will be achieved through the use of antlerless harvest. Antlerless harvest will be identified in amounts adequate to reduce crop damage, protect ranges and maintain buck objectives. Buck harvest strategies will be developed through the RAC and Wildlife Board process to achieve management objectives for buck:doe ratios.

Limiting Factors (May prevent achieving management objectives)

- < Crop Depredation - Agricultural crop damage will be minimized by herding and/or through landowner permits/depredation hunting.
- < Habitat - Winter range may be a limiting factor in localized areas. Overall “very poor” range condition rating may be indicative of decreased carrying capacity (see discussions below).
- < Predation - Seek assistance of USDA/Wildlife Services for coyote control if needed prior to and during fawning period. Establish annual cougar harvest levels consistent with good multiple use management and to maintain balance with deer objectives.
- < Highway Mortality - Highway mortality along I-15 and Highway 14 is significant.
- < Illegal Harvest - There is no evidence that illegal harvest is a limiting factor on the unit.
- < Interspecific competition - No limitation generated by elk/deer interactions has been documented.

HABITAT MANAGEMENT OBJECTIVES

- < Maintain and protect adequate habitat to support herd objectives.
- < Improve quality of critical deer winter range east of I-15 and south of Cedar City.
- < Reduce highway deer mortality along Interstate I-15 south of Cedar City and along Highway 14 east of Cedar City.
- < A major proportion of both summer and winter habitat for deer on this unit is on private land. Therefore, it is paramount to work with private landowners to maintain both summer and winter habitat. Currently, there is one CWMU of 13,000 acres (Mt. Carmel - Zion) in the Muddy Creek drainage on the east portion of this unit. Other landowners have expressed interest in a CWMU and they may be organized in the future.
- < Work with BLM to maintain deer winter range between Cedar City and Anderson Junction on the west side of the unit.

Condition of deer winter range on Unit 29, as indicated by DWR range trend surveys.

Year	Mean DCI score for Unit	Classification	Unit-specific DCI score range: Poor	Unit-specific DCI score range: Fair	Unit-specific DCI score range: Good
1998	43	Poor	35 - 49	50 - 64	65 - 79
2003	32	Very Poor			

All of Zion National Park is within this deer unit and a significant number of deer winter in the park. Cooperative efforts between DWR and park staff will be required to meet objectives of both agencies.

HABITAT MANAGEMENT STRATEGIES

- < Deer mortality on I-15 and SR-14 resulting from vehicle collisions has been a problem for years. A deer barrier fence was recently constructed on I-15 from Anderson Junction to the black ridge. Underpasses are present in this area to permit deer passage. Many deer are killed on I-15 between Ash Creek Reservoir and Cedar City. A solution to this problem needs to be developed.
- < Monitoring will be accomplished using DWR range trend studies and range rides.
- < Seek agency and landowner cooperative habitat management efforts.
- < Continue to cooperate in the ongoing habitat improvements in the Muddy/Meadow Creek drainages.
- < Maintain and protect critical winter range from future losses. Protect winter range east of I-15 from development from Cedar City to Anderson Junction. Acquire critical winter range when the opportunity arises.
- < Continue cutting invading pinyon-juniper on winter range on BLM lands south of Cedar City.
- < Protect wintering areas on Smith Mesa and identify specific cooperative range improvement projects.

PERMANENT RANGE TREND SUMMARIES

Unit 29, Zion

Only six range study transects (3 permanent and 3 special studies) have been established on this unit because of the vast amount of private land in this area. All were last read in 2003 and indicated range conditions had fallen from "poor" to "very poor". Browse, soils, and herbaceous understory conditions at almost all of these sites were in a slightly downward to downward condition. Soil conditions were stable in the Elephant Gap Total Enclosure.

Winter range is a limiting factor on the west side of the Zion Unit from Cedar City south to Toquerville where it is adjacent to Interstate 15. Pinyon-juniper encroachment, browse decadence, and invasion of cheatgrass are winter range problems on the unit.

Low DCI ratings might normally require a reduction in population objectives. However, there is a very low number of range trend study sites on this unit and their placement is severely hindered by the large amount of privately owned land. The deer population on this unit is not large enough to adversely impact winter ranges. There are also, as yet, only limited depredation issues on this unit. Range condition monitoring will be highlighted on this unit and the need for adjustments will be assessed in 2008, following the next round of range trend analyses.

Duration of Plan

This unit management plan was approved by the Wildlife Board on _____ and will be in effect for five years from that date, or until amended.